

| Human      | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Chimpanzee | Cys | Thr | Leu | Gln | Glu | Asn | Pro | Phe | Phe | Ser | Gln | Pro |
| Orangutan  | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Gibbon     | --- | Gln | --- | His | --- | --- | --- | --- | --- | --- | --- | --- |
| Baboon     | --- | Lys | Pro | Arg | --- | --- | Gln | --- | --- | --- | Lys | --- |
| Rhesus     | --- | Lys | Pro | Arg | --- | --- | Lys | --- | --- | --- | Lys | --- |
| Marmoset   | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Arg | Leu |
| Bovine     | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | --- |
| Ovine      | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | --- |
| Equine     | --- | Lys | --- | Arg | --- | --- | Lys | Tyr | --- | Phe | Lys | Leu |
| Porcine    | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | Leu |
| Rabbit     | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | Leu |
| Mouse      | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | Leu |
| Rat        | --- | Lys | --- | Lys | --- | --- | Lys | Tyr | --- | --- | Lys | Leu |
| Whale      | --- | Lys | --- | Lys | Gln | --- | Arg | --- | --- | --- | Lys | --- |
| Quail      | --- | Lys | --- | Gly | --- | --- | Arg | --- | --- | --- | Lys | --- |
| Chicken    | --- | Lys | --- | Gly | --- | --- | Arg | --- | --- | --- | Lys | --- |
| Turkey     | --- | Lys | --- | Gly | --- | --- | Arg | --- | --- | --- | Lys | --- |
| Bullfrog   | --- | Arg | --- | Lys | --- | --- | Leu | Arg | --- | --- | Asn | Met |
| Salmon 1   | --- | Lys | --- | Lys | --- | --- | Lys | Val | --- | --- | Asn | --- |
| Salmon 2   | --- | --- | --- | Lys | Pro | --- | Thr | Ile | --- | Pro | Asn | --- |
| Catfish    | --- | Lys | --- | Lys | --- | --- | Asn | Ile | --- | --- | Lys | --- |
| Tuna       | --- | --- | --- | Lys | --- | --- | Asn | Val | --- | --- | Arg | Asp |
| Yellowfin  | --- | --- | --- | Lys | Lys | --- | Asn | Val | --- | --- | Arg | Asp |
| Bass       | --- | --- | --- | Arg | Lys | --- | Thr | Val | --- | --- | Arg | Asp |
| Carp 1     | --- | --- | --- | Arg | Lys | --- | Ser | Val | --- | --- | Arg | --- |
| Carp 2     | --- | Lys | --- | Lys | --- | --- | Asn | Ile | --- | --- | Lys | --- |
| Pike eel   | --- | --- | --- | Lys | --- | --- | Asn | Ile | --- | --- | Lys | --- |
| Eel        | --- | Arg | --- | Lys | Asp | --- | Lys | --- | --- | --- | Lys | --- |
|            | --- | Arg | --- | --- | --- | --- | Lys | Ile | --- | --- | Lys | --- |

FIG. 1A

|                     | 10  | 11  | 12  | 13  | 14  | 15  | 16  | 17  | 18  | 19  | 20  | 21  |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                     | Cys | Thr | Leu | Gln | Glu | Asn | Pro | Phe | Phe | Ser | Gln | Pro |
| Human               |     |     |     |     |     |     |     |     |     |     |     |     |
| Q13K                | --- | --- | --- | Lys | --- | --- | --- | --- | --- | --- | --- | --- |
| P16K                | --- | --- | --- | --- | --- | --- | Lys | --- | --- | --- | --- | --- |
| Q20K                | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | Lys | --- |
| P16K+Q20K           | --- | --- | --- | --- | --- | --- | Lys | --- | --- | --- | Lys | --- |
| P16K+Q20K+Q13K      | --- | --- | --- | Lys | --- | --- | Lys | --- | --- | --- | Lys | --- |
| P16K+Q20K+Q13K+E14K | --- | --- | --- | Lys | Lys | --- | Lys | --- | --- | --- | Lys | --- |

FIG. 1B

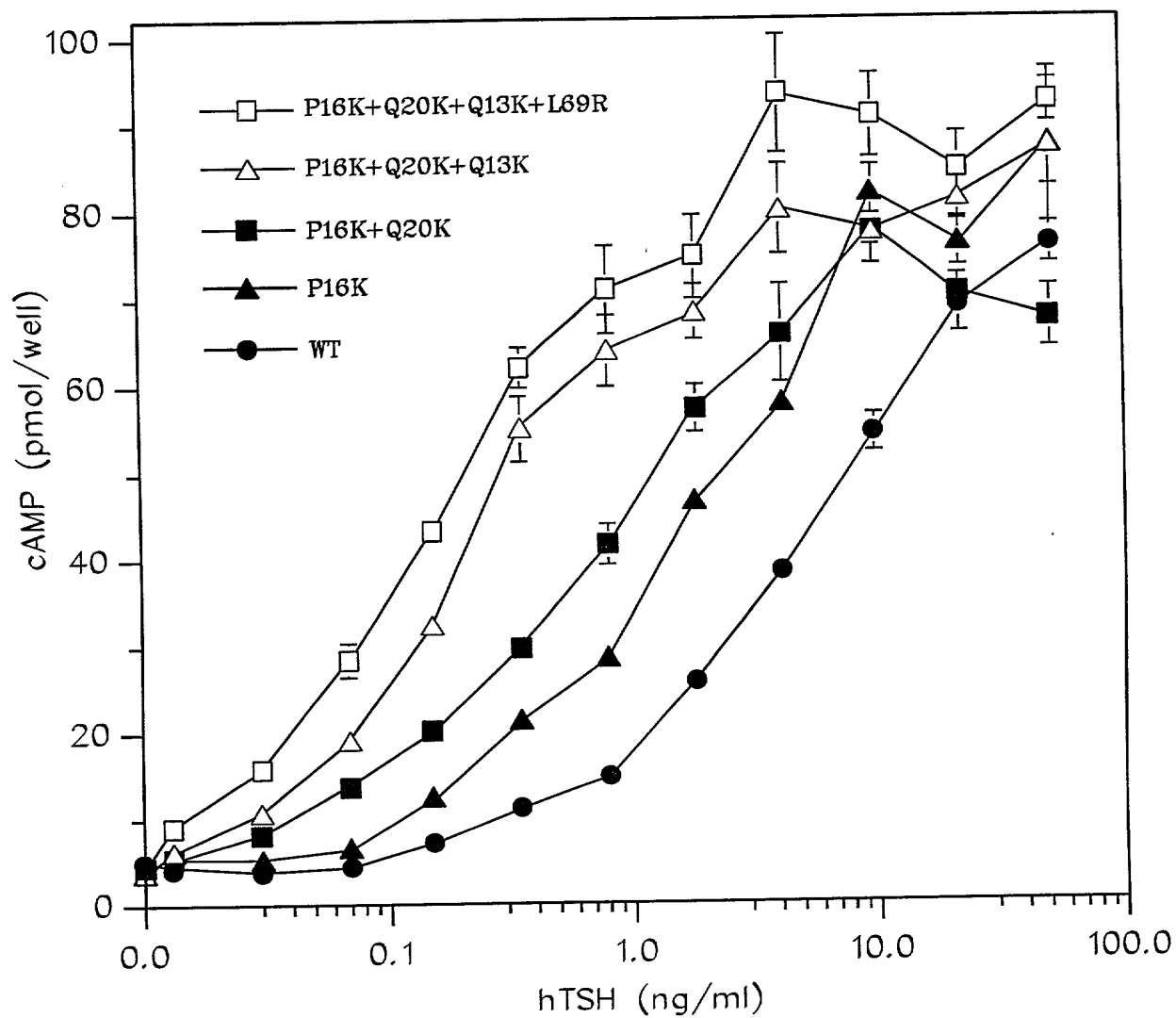


FIG. 2A

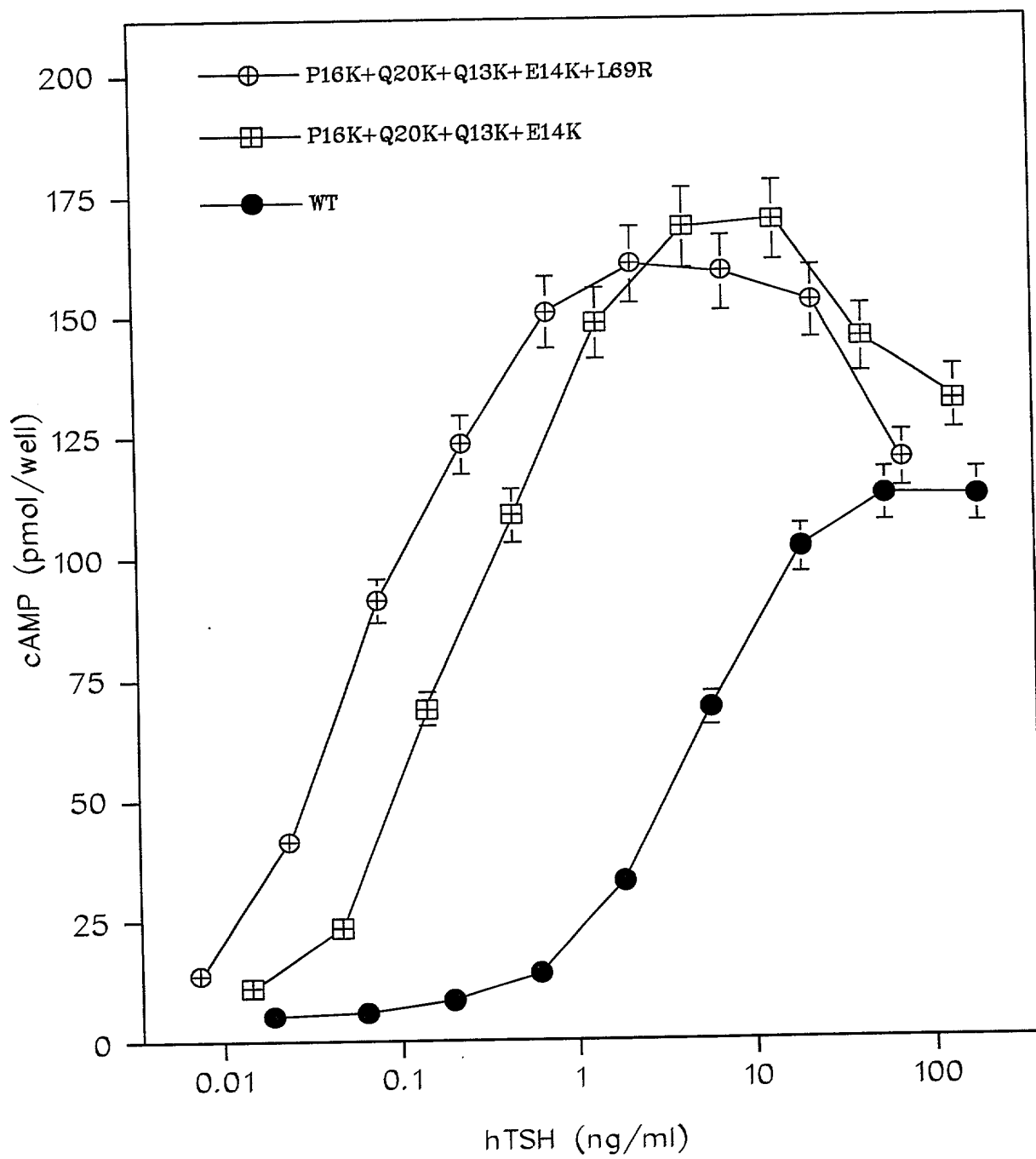


FIG. 2B

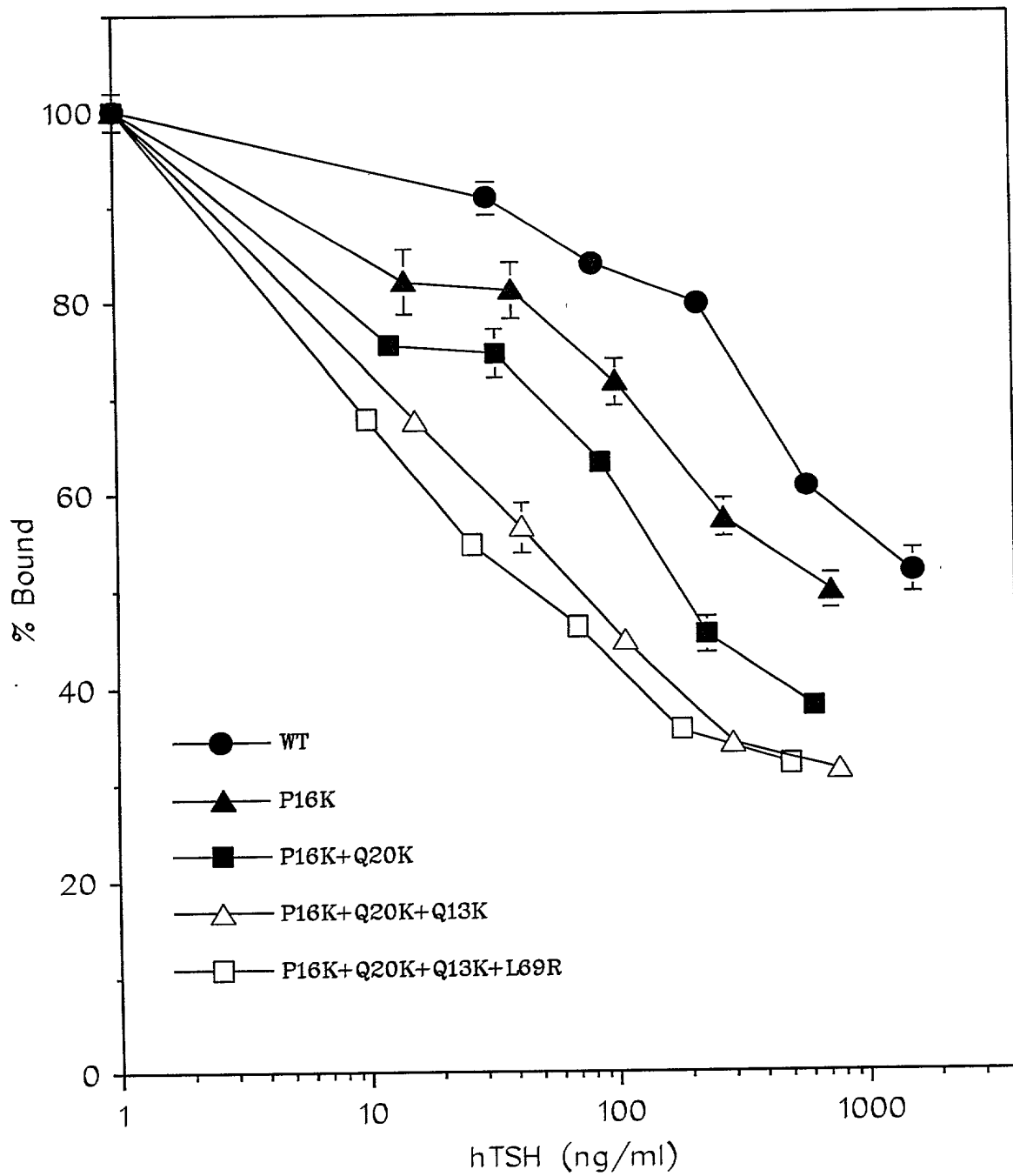


FIG. 2C

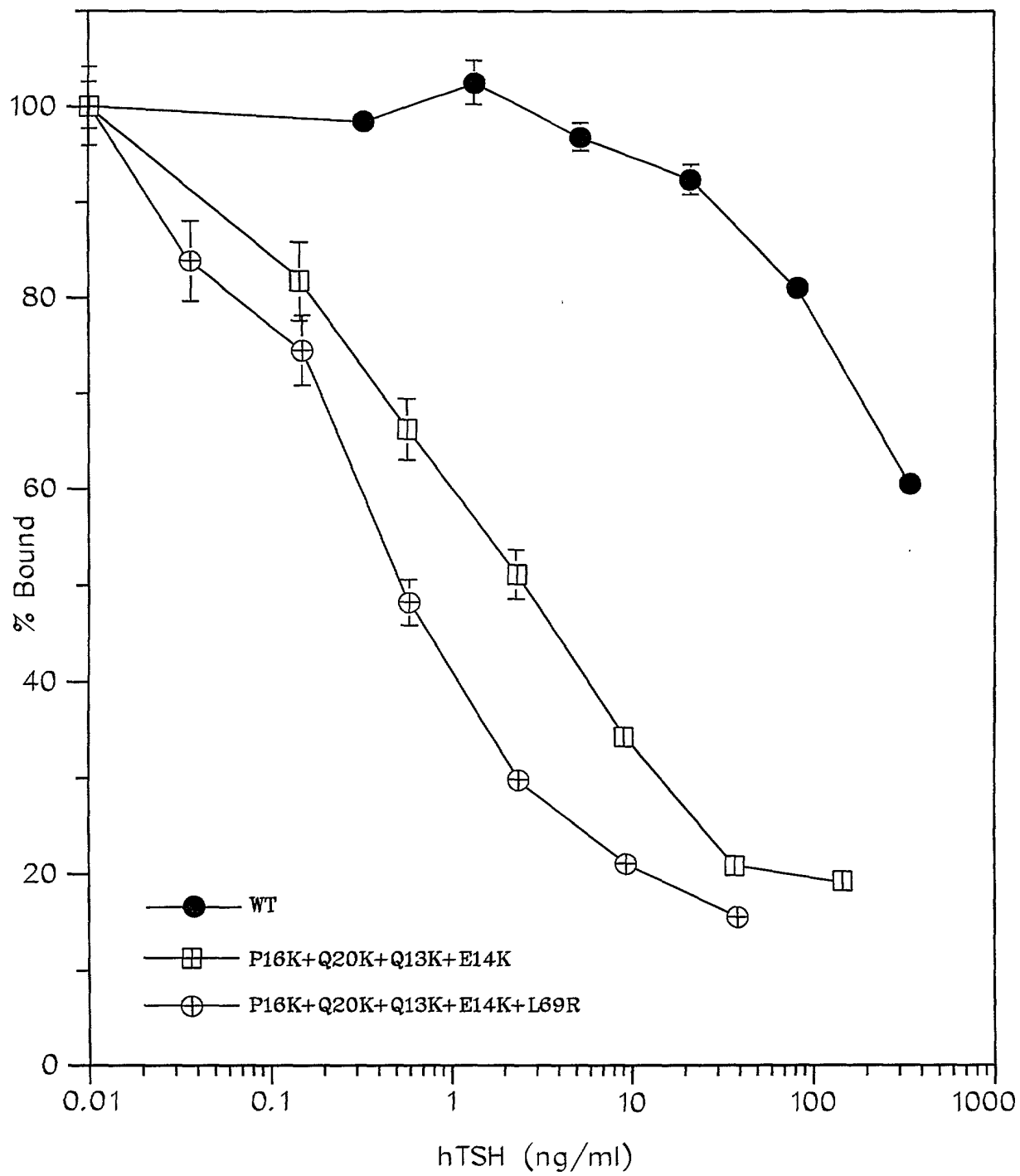


FIG. 2D

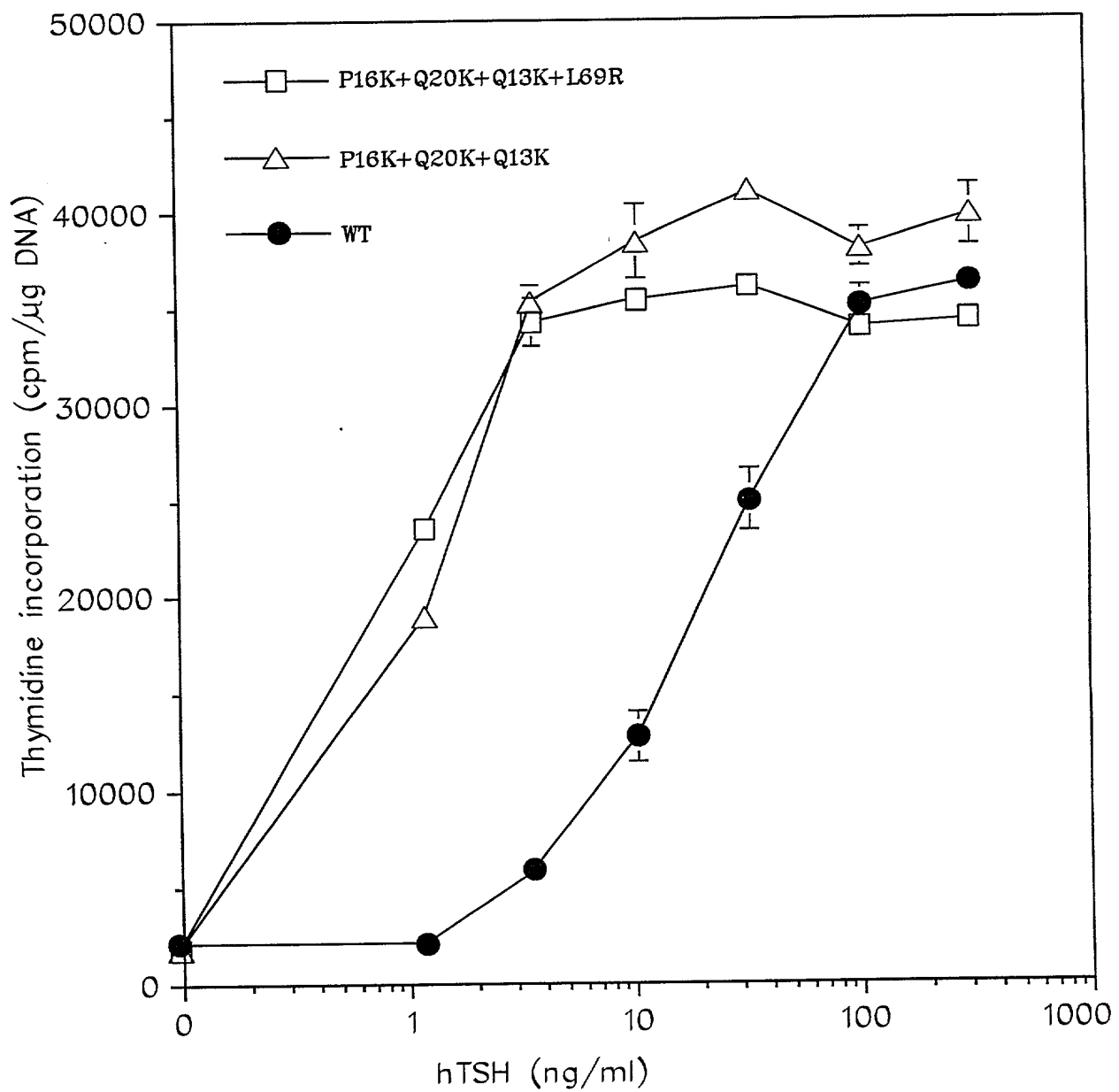


FIG. 2E

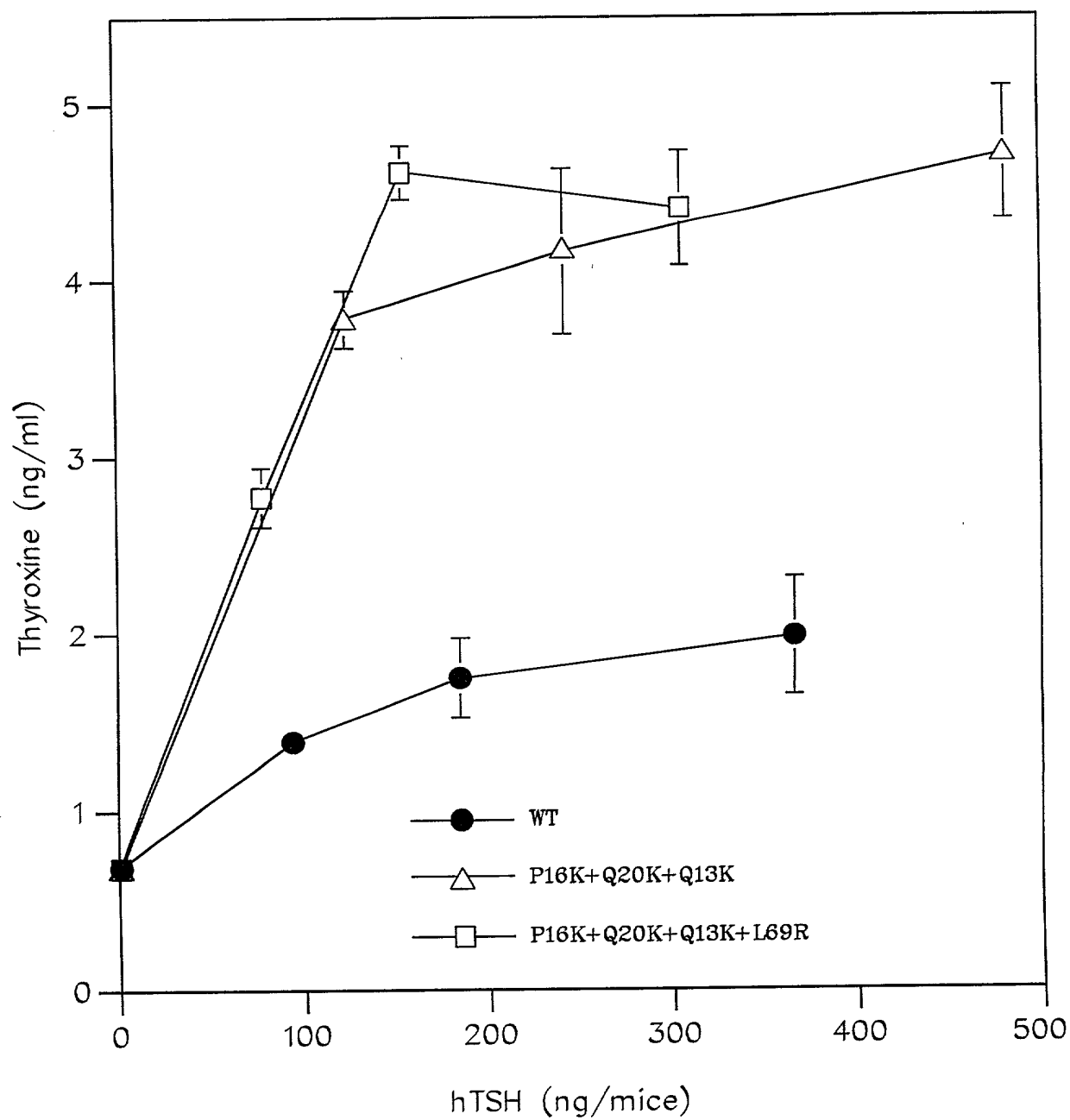


FIG. 2F



# cAMP Production in CHO-hTSH Receptor Cells

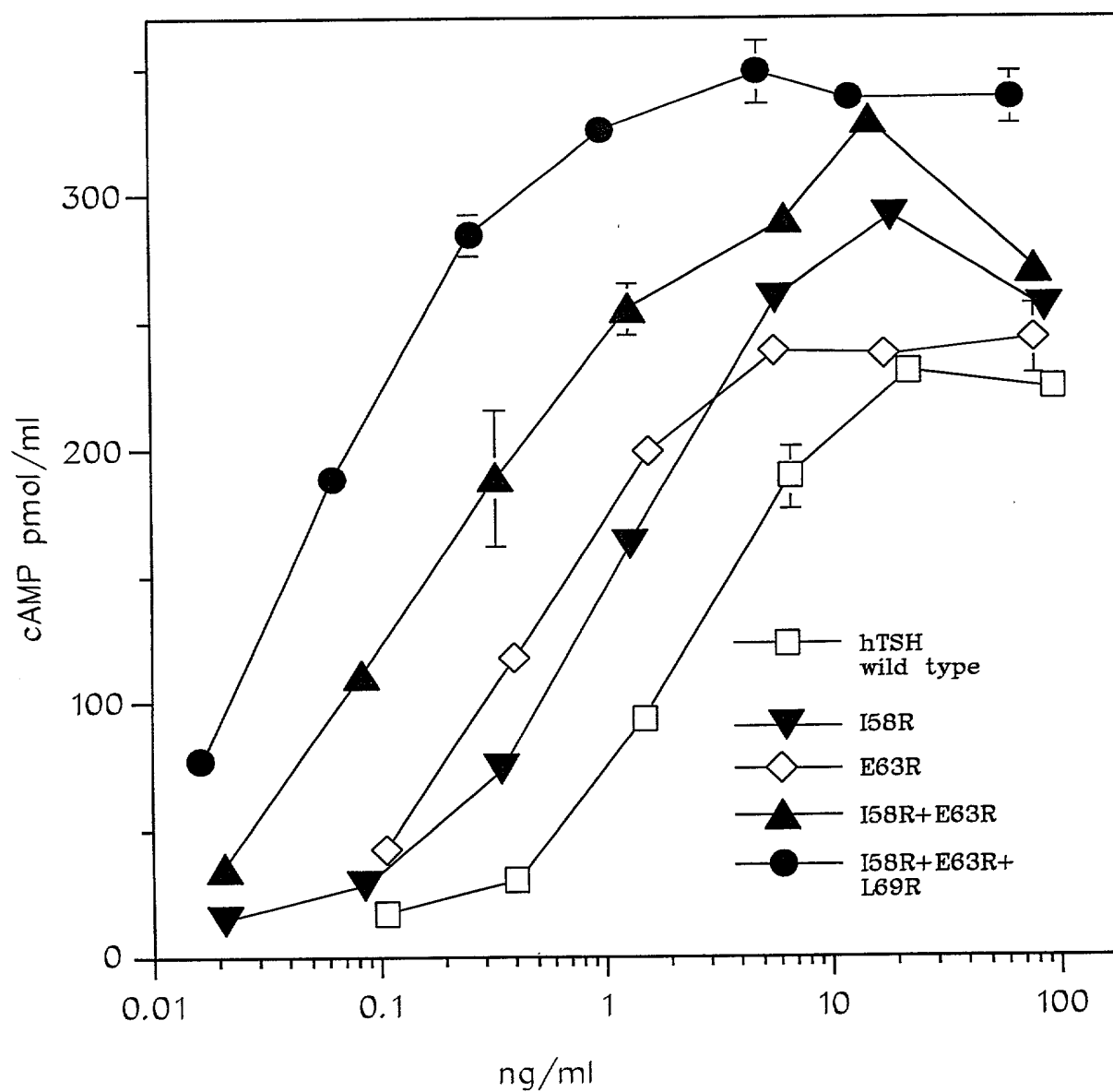


FIG. 2G

# Binding to CHO-hTSH Receptor Cells

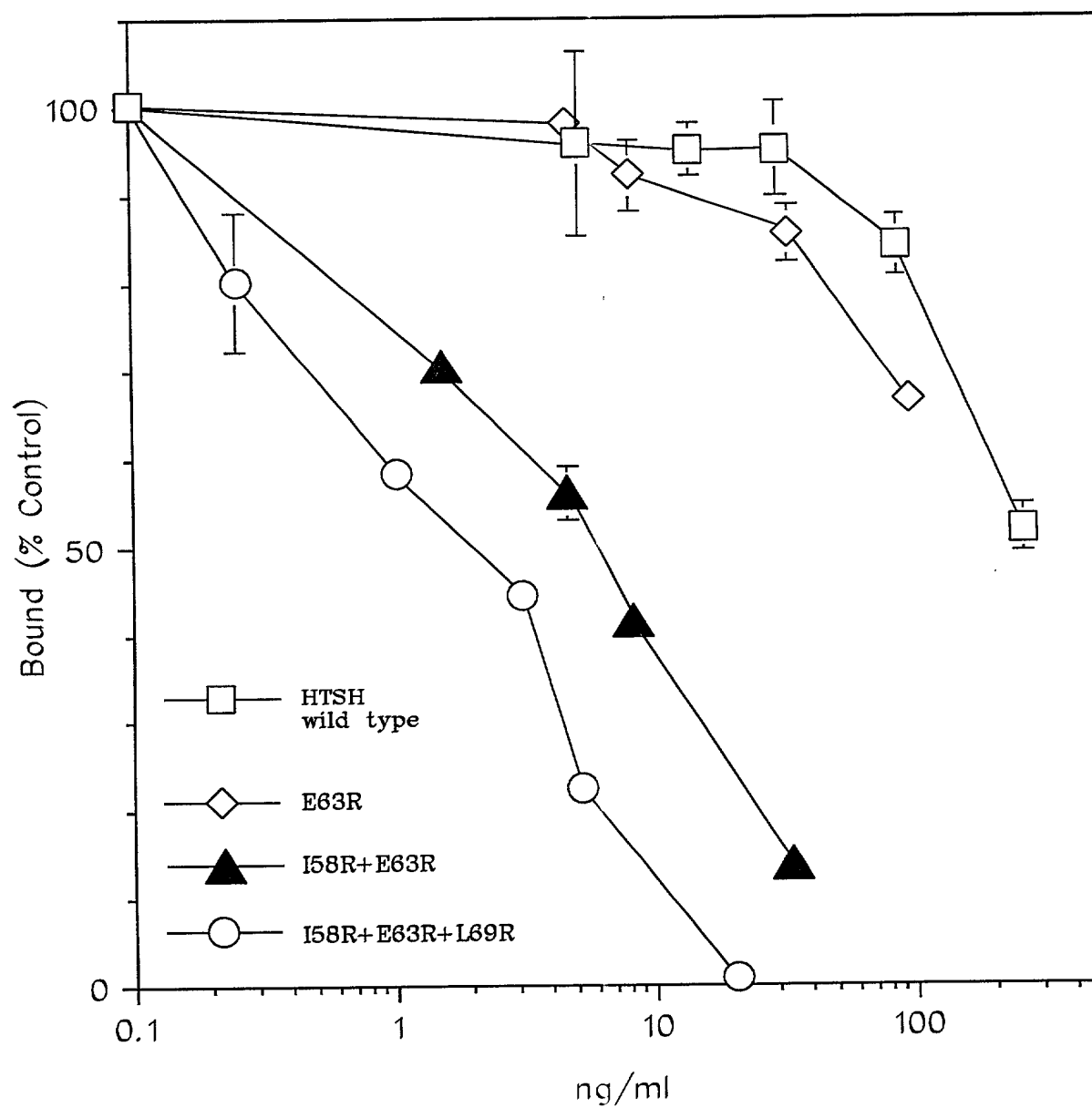


FIG. 2H

205210-ET1/500T

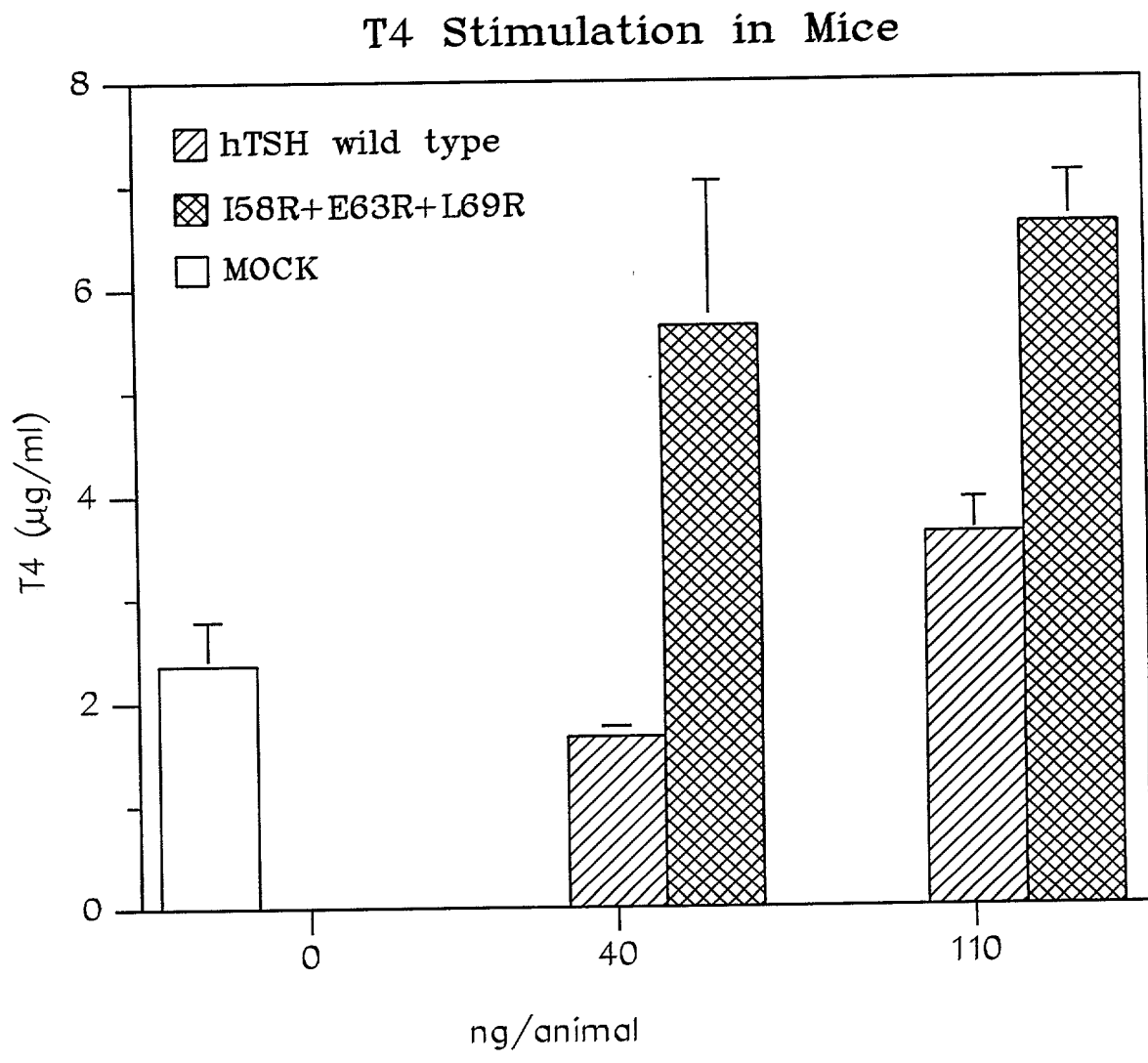


FIG. 2I

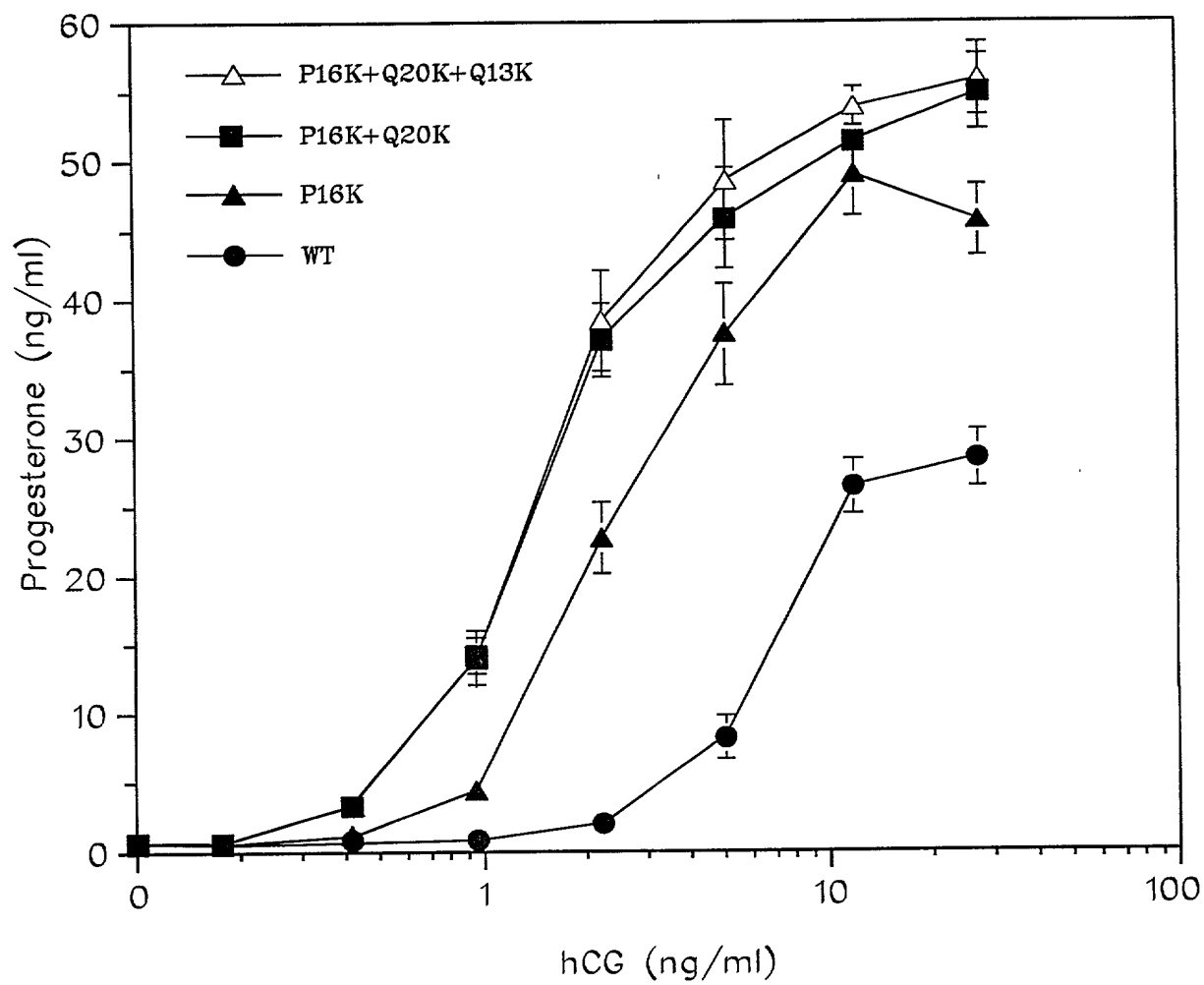


FIG. 3A

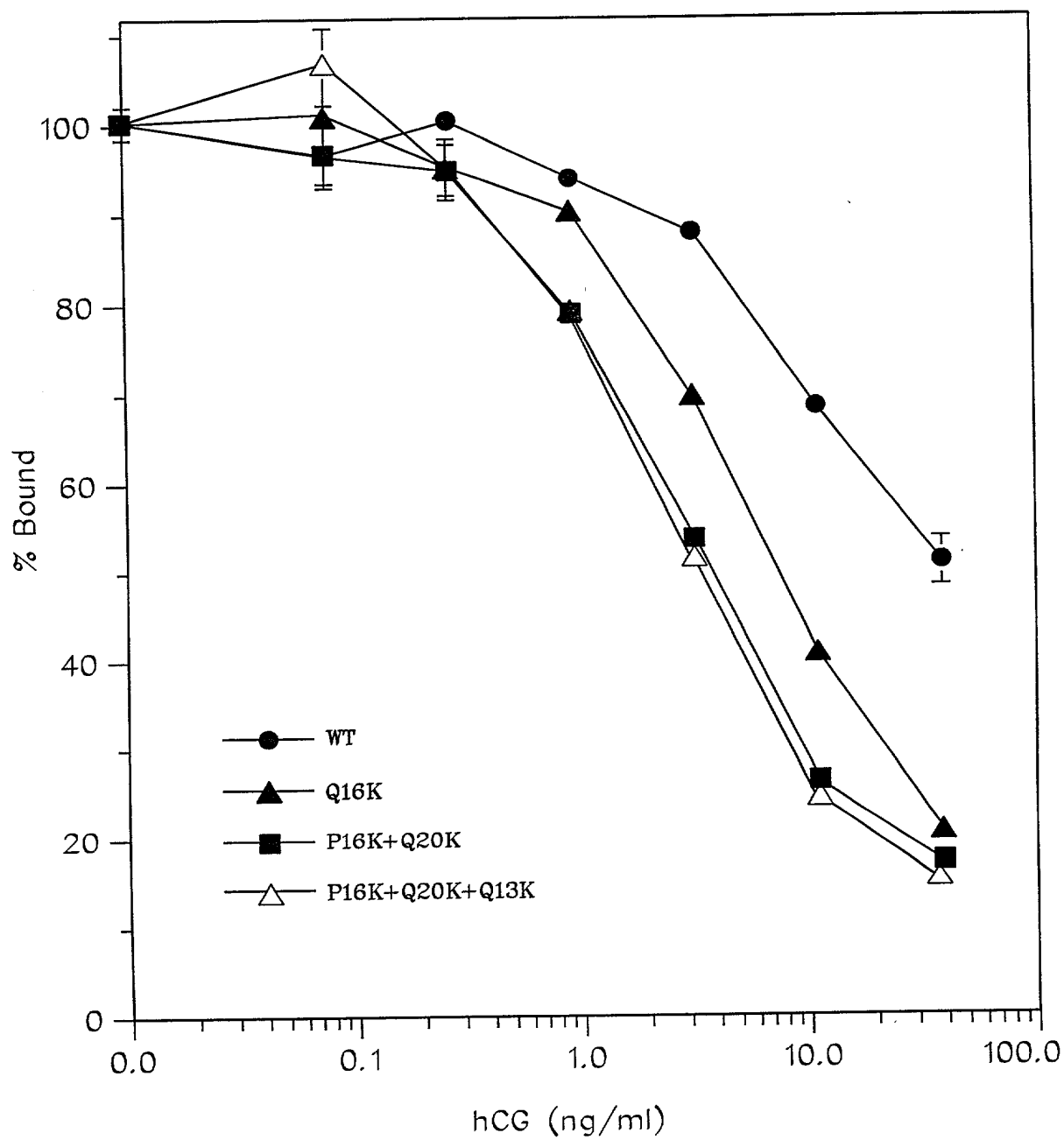


FIG. 3B

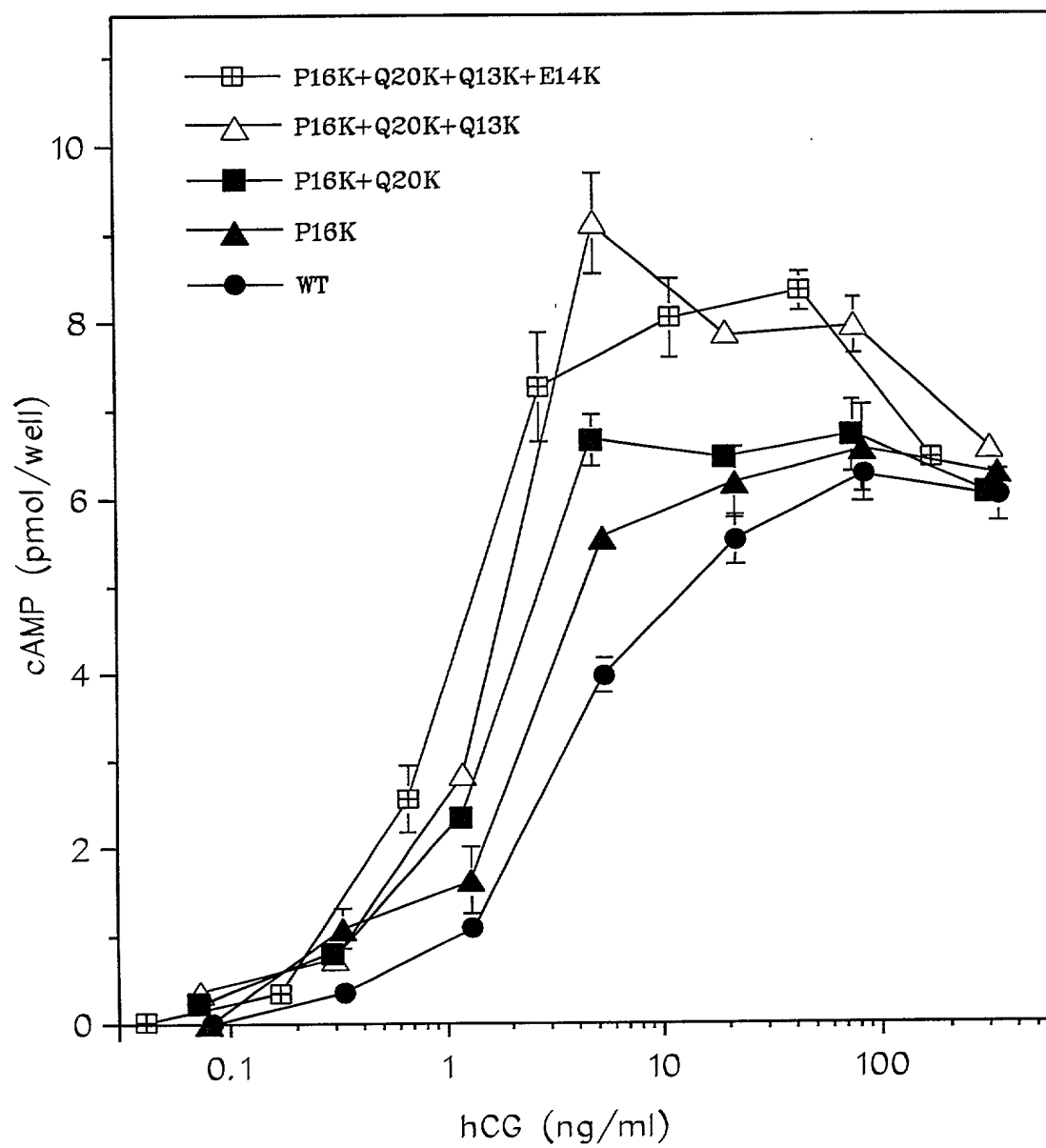


FIG. 3C

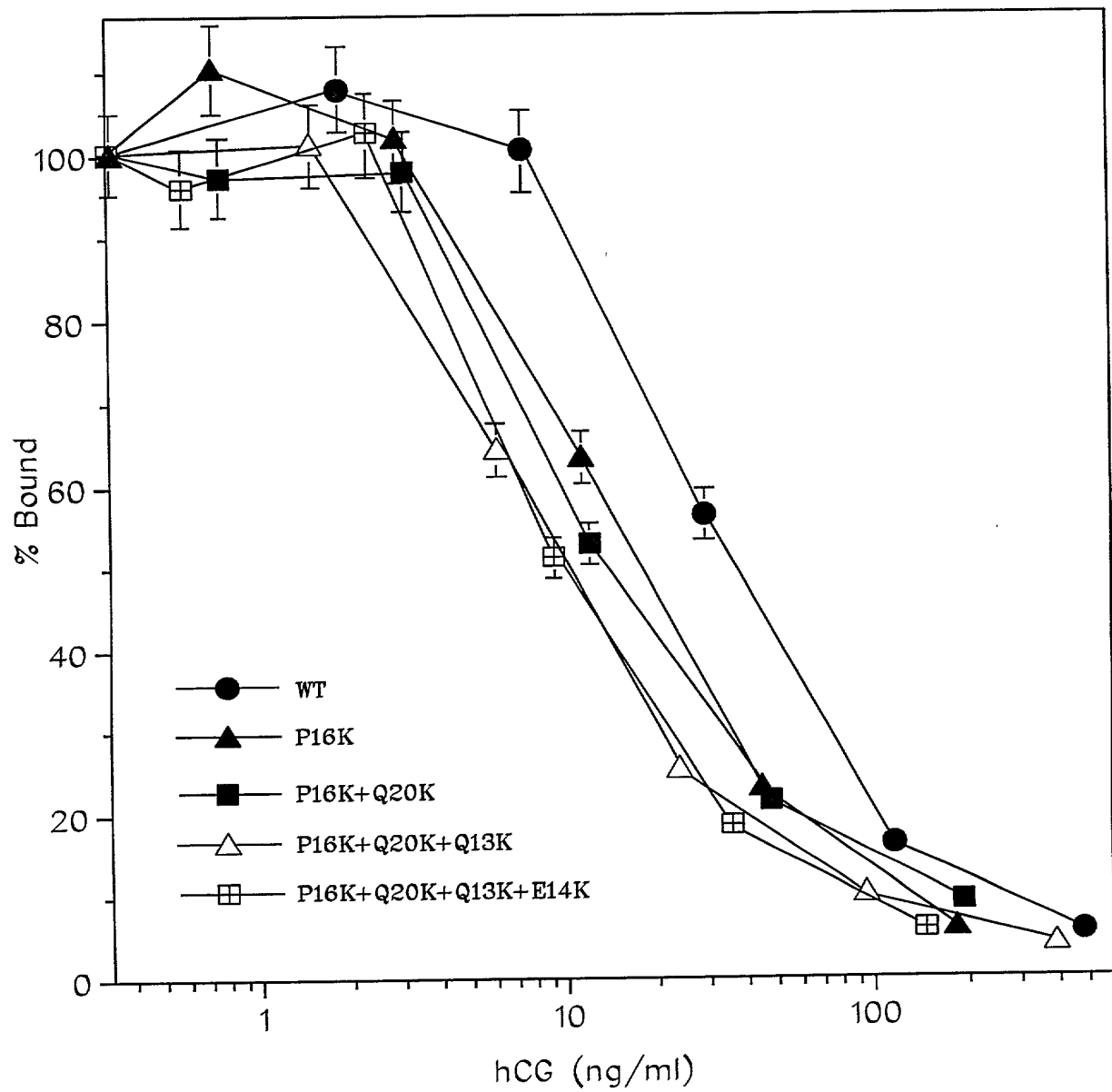


FIG. 3D